WHAT IS CLAIMED IS:

1. An optical transport network for providing broadcasting services, comprising:

an OLT for assigning VCIs to each of single-channel MPTSs received from a plurality of broadcasting service providers and converting the single-channel MPTSs into a plurality of ATM cells;

an ATM cell conversion section for converting the output signals from the OLT into an ATM format and for outputting at least one broadcasting channel data from each ATM cell;

a switch for switching each digital broadcasting data output from the ATM cell conversion section to a subscriber; and

a control section for receiving the header information in the ATM cell from the ATM cell conversion section, for receiving a desired broadcasting channel from the subscriber, and for controlling the switch so that channel data outputted from the ATM cell conversion section can be corresponded to the channel desired by the subscriber.

2. The optical transport network as claimed in claim 1, wherein the header information includes an ATM VCI field representing a communication path of a corresponding ATM cell, and a channel information field containing broadcasting station information corresponding to PID information of each broadcasting channel field included in a payload portion of the ATM cell.

3. A method for providing broadcasting services in an optical transport network, the method comprising the steps of:

(1) receiving single-channel MPTSs from a plurality of broadcasting service providers, assigning each VCI to the single-channel MPTSs, converting the single-channel MPTSs into ATM cells;

(2) converting the converted single-channel MPTSs into an ATM format data, dividing the ATM format data into ATM cells according to the VCIs, and outputting at least one broadcasting channel data from each ATM cell;

(3) updating broadcasting channel information according to the header information in the ATM cell; and

(4) upon receiving a channel request from a subscriber, switching each broadcasting channel data to the requested channel by the subscriber.

4. The method as claimed in claim 3, wherein the header information includes an ATM VCI field representing a communication path of a corresponding ATM cell, and a channel information field containing broadcasting station information corresponding to PID information of each broadcasting channel field included in a payload portion in the ATM cell.

5. An optical transport network for providing broadcasting services comprising:

an OLT for converting digital broadcasting data from a plurality of service providers into optical signals in the form of a plurality of ATM cells and for assigning an individual VCI to each of the ATM cells;

an ONU for converting the output signals from the OLT into electrical signals according to an ATM format; and

a controller for providing a broadcasting service requested by a subscriber by matching the VCI that matches the broadcasting service requested by the subscriber.

6. The optical transport network as claimed in claim 5, wherein the digital broadcasting data from the plurality of service providers are in the form of single-channel MPTSs (multiple program transport streams).

7. The optical transport network as claimed in claim 6, wherein the single-channel MPTS comprises at least one header and at least one channel data.

8. The optical transport network as claimed in claim 7, wherein the header field includes an ATM VCI field and a channel information field with broadcasting station information.

9. The optical transport network as claimed in claim 8, wherein the broadcasting channel field includes a MPEG data field having digital broadcasting data and a PID information field having channel information.

10. The optical transport network as claimed in claim 5, wherein the output of the OLT is transmitted to the ONU via an optical fiber.